Category	Group
Training	
Conference attendance	
2.1 Software infrastructure	
2.2.1 Video-based behavioral analysis	MoSeq
	BehaveNet
	PS-VAE
2.2.2.1 Spike sorting	
2.2.2.2 Low-dimensional representations of spiking data	GLDS
	PLDS
	HMM
	GPFA
	svGPFA
	LFADS
2.2.2.3 Low-dimensional representation of local-field potentials	
2.2.2.4 Neural decoding	
2.2.2.5 Comparing multiple data-analysis methods	
integration testing	
documentation	
workshop preparation	

Total (weeks)
Total (years)

Task

Build Bonsai ML API
C#-Python communication
C#-R communication
C#-Matlab communication
testing
learn functionality of MoSeq
install and run MoSeq
learn Moseq code
use MoSeq to analyze data
add online MoSeq state inferences to Bonsai behavioral video
learn functionality of BehaveNet
learn BehaveNet code
use BehaveNet to analyze data
add online BehaveNet state inferences and reconstructed videos to Bonsai behavioral video
learn functionality
learn code
use to analyze data
add online state inferences and reconstructed videos to Bonsai behavioral video

learn LDS
understand GLDS R code
use GLDS to analyze neural data
interface Bonsai with GLDS: compute latents for spikes recorded by Bonsai and display the latents in Bonsai
understand PLDS Matlab code
use PLDS to analyze neural datad GLDS R code
interface Bonsai with PLDS: compute latents for spikes recorded by Bonsai and display the latents in Bonsai
learn about HMMs
understand HMM R code
use HMMs to analyze neural data
interface Bonsai with PLDS: compute latents for spikes recorded by Bonsai and display the latents in Bonsai
learn about GPFA
understand GPFA Matlab code
use GPFA to analyze neural data
interface Bonsai with GPFA: compute latents for spikes recorded by Bonsai and display the latents in Bonsai
understand svGPFA Python code
use svGPFA to analyze neural data
interface Bonsai with svGPFA: compute latents for spikes recorded by Bonsai and display the latents in Bonsai
learn about autoencoders and RNNs
understand LFADS Python code
use LFADS to analyze neural data
interface Bonsai with LFADS: compute latents for spikes recorded by Bonsai and display the latents in Bonsai
extract LFPs from neuropixel recordings
visualize LFPs in Bonsai
apply GLDS, GPFA, HMM and LFADS to LFPs and visualize them in Bonsai
add scikit-learn classifiers for independent features (support vector classifier, k-nearest neighbor, naive bayes, ANN)
add sktime classifiers for time series
neural data preprocessing
neural data analysis with all methods

# Weeks	
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129
2.6875